



U.S. Fish & Wildlife Service
Sacramento Fish & Wildlife Office
Species Account
EL DORADO BEDSTRAW
Galium californicum sierrae



CLASSIFICATION: Federal Endangered Species
(*Federal Register* [61:54346 PDF](#) (104 KB); October 18, 1996)
http://ecos.fws.gov/docs/federal_register/fr3018.pdf

This species was listed as rare by the California Department of Fish and Game in November 1979. The California Native Plant Society has placed it on List 1B (rare or endangered throughout its range).



CRITICAL HABITAT: Not designated

RECOVERY PLAN: [Recovery Plan for Gabbro Soil Plants of the Central Sierra Foothills](#).
8/30/2002
http://ecos.fws.gov/docs/recovery_plan/020830b.pdf (6 MB)

5 YEAR REVIEW: INITIATED
Federal Register 74:12878; 3/25/2009
http://frwebgate.access.gpo.gov/cgi-bin/getdoc.cgi?dbname=2009_register&docid=fr25mr09-125

DESCRIPTION

El Dorado bedstraw is a softly hairy perennial herb in the coffee family (Rubiaceae). El Dorado bedstraw can be distinguished from other subspecies of *G. californicum* by its very narrow leaves.

Stems grow up to from 7-14 cm (about 3-6 inches) long. Four narrow leaves are arranged in groups at each node. Pale yellow flowers appear on the end of stems in May and June. There are male and female plants. The males have flowers in clusters at the ends of stems. Females commonly bear their flowers singly at nodes.

Fruits are fleshy 2-lobed berries with minute hairs. Minute hairs cover the fruit.



El Dorado bedstraw grows in oak woodland areas, including sites with ponderosa pine and gray pine, on gabbro soils. Gabbro soils originate from volcanic rocks (gabbrodiorite) that are mildly acidic, rich in iron and magnesium, but low in calcium. They often contain other heavy metals such as chromium.

Gabbro, a dark large-crystalled rock, is formed when liquid magma cools slowly underground. A red soil is formed when the rock is exposed and weathers at the earth's surface. These soils are well-drained and are underlain by gabbrodiorite rocks at a depth of more than 1 meter (3 feet.)

See Hickman (1993) in General Information about California Plants, below, for a detailed description of the entire species.

DISTRIBUTION

El Dorado bedstraw is restricted to about ten occurrences in one localized area: Pine Hill, El Dorado County, and surrounding ridges to the west within a distance of approximately 4 kilometers (2.5 miles).

U.S.G.S. 7.5 minute quads: Shingle Springs (510B) 3812068, Clarksville (511A) 3812161, Pilot Hill (527D) 3812171

THREATS

Residential development, road construction, grazing by horses and irrigation threaten this species. Restricted distribution and limited numbers of individuals make it susceptible to catastrophic events such as disease or pest outbreak, severe drought, or other natural disasters.

Most of the plants are on private land. The Bureau of Land Management manages the land where at least one population occurs. The California Departments of Forestry and Fire Protection and Fish and Game manage another site. Learn more about protection efforts by the [Pine Hill Preserve](#).

REFERENCES FOR ADDITIONAL INFORMATION

Wilson, J.L. 1986. A study of plant species diversity and vegetation pattern associated with the Pine Hill gabbro formation and adjacent substrata, El Dorado County, California. California State University. Sacramento. Thesis.

[General Information about California Plants](#)

Photo credits: Jeremiah Karuzas and Harry Mossman, U.S. Fish & Wildlife Service

Larger images:

http://www.fws.gov/sacramento/images/El_Dorado_bedstraw_Jeremiah_Karuzas_FWS.jpg

http://www.fws.gov/sacramento/images/eldorado_bedstraw.jpg

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Last updated July 27, 2009